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INFORMATION VISUALIZATION USING COMPUTER ANIMATION

Visualization is any technique for creating images, diagrams, or animations to communicate a message. Visualization through visual imagery has been an effective way to communicate both abstract and concrete ideas since the dawn of humanity. Examples from history include cave paintings, Egyptian hieroglyphs, Greek geometry, and Leonardo da Vinci`s revolutionary methods of technical drawing for engineering and scientific purposes [4].

Software visualization studies techniques and methods for graphically representing different aspects of software. Its main goal is to enhance, simplify and clarify the mental representation a software engineer has of a computer system. During many years, visualization in 2D space has been actively studied, but in the last decade, researchers have begun to explore new 3D representations for visualizing software. There are such methods of computer visualization as computer graphics, animation and virtual reality [3, p. 264].

Computer Graphics is the creation of pictures with the help of a computer. The end product of the computer graphics is a picture. It may be a business graph, drawing, and engineering [2, p. 157]. Images used in the graphic design of printed material are frequently produced on computers, as are the still and moving images seen in comic strips and animations.

Animation is the process of designing, drawing, making layouts and preparation of photographic sequences which are integrated in the multimedia and gaming products. Animation involves the exploitation and management of still images to generate the illusion of movement. A person who creates animations is called

animator. He or she uses various computer technologies to capture the still images and then to animate these in a desired sequence.

The field of computer animation application as well as computer graphics is of great use in various fields of IT-technologies: advertising and marketing, urban planning, industry, computer games, cinematograph, architecture and interior design.

Virtual Reality (VR) is the use of computer technology to create a simulated environment. Unlike traditional user interfaces, VR places the user inside an experience. Instead of viewing a screen in front of them, users are immersed and able to interact with 3D worlds. By simulating as many senses as possible, such as vision, hearing, touch, even smell, a computer is transformed into a gatekeeper to this artificial world. The only limits to near-real VR experiences are the availability of content and cheap computing power [1].

Virtual reality application: construction and real estate, retail, virtual travel, advertising and promotions, production, training, online support, medicine, entertainment.

Computer visualization techniques are now used in the following disciplines:

- architecture and engineering;
- biomedical applications;
- business and management graphics;
- visual arts and design;
- electric CAD/CAM;
- human factors and user interfaces;
- printing and publishing;
- statistical graphics;
- education and learning;
- mapping and cartography;
- video and multimedia technology.

To conclude, it is important to highlight that technical progress dictates our living conditions. Our future is closely connected with digital technologies, therefore, we should be able to use them for the purposes we want, because it is not only simplifies our life, but also makes it more interesting.

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